To Whom This May Concern At the FCC, FTC, and U.S. Justice Department including FCC Chairman, FCC Commissioners and NTIA,

I recently found an interesting and possibly troubling article on "How Apple co-opted the Internet" worth a read by regulators -- and urge them to investigate and take any action they deem necessary.

Apple is a hardware company. It makes phones, tablets, music players and computers, operating systems for them, and marketplaces to buy media and apps to run on them. Apple has the only effectively functioning vertically integrated consumer electronics ecosystem, a loosely-walled garden that makes technology outside the Apple world feel gritty, raw, and uncoordinated. This is the result of Apple's solid execution on its strategy, and one of the keys to its ongoing success.

The Web, meanwhile, is a Wild West of open standards and available-to-any-device content services and apps. The Web makes hardware unimportant, in theory, so it should be a big threat to Apple. But it's not turning out that way, because after years of dragging its feet and false starts, Apple is on the verge of getting the Web very right--for Apple--with iCloud.

What's curious, and smart, about iCloud is that Apple is using the infrastructure of the Web to tie Apple devices together, but Apple is not making much of a push to create Web apps--because good Web apps would make it too easy for people to take the Apple brand outside the walls of the Apple experience.

Apple is using the Web (technically, the Internet) primarily to synchronize data between Apple devices. Take a picture on your iPhone, and it'll show up on your iPad and your Mac. Write a document on your MacBook, and you can see it on your iPad (and share it from there). Lose your entire iOS device, in fact, and you can restore its backup from the "cloud" to a replacement. The Internet, for Apple, is a conduit used to tie Apple devices together. If iCloud works as advertised, it will be invisible to the user. Contrast this to Google's services, where you're almost always aware that you are on the Internet; your hardware is a mere vessel for it.

The biggest example of Apple using the Internet's pipes but not its facade: music. With iCloud connected to your iTunes library, all your songs are available on all your Apple devices. Yet even though Apple is storing your library in the cloud, you can't play it without Apple hardware. Meanwhile, the Web is exploding with music services that play tunes on any browser anywhere. You can also access your iTunes library online, after a fashion, using services offered by heavy hitter Web companies: Google's Music, and Amazon's Music Locker.

Only for e-mail, calendar, and contacts does Apple make your data available via a Web interface. The

company is, in fact, reducing its Web-based user interfaces even as it pushes iCloud. No longer will Apple host Web sites for consumers through MobileMe, or allow photo galleries on that service. This isn't a very Web-friendly strategy (consumers who entrust personal content to Web services often expect it to stay there forever), but it fits with Apple's clear direction of using the Web primarily as connective tissue for its ecology of products.

I find Apple's clear unwillingness to release Web front-ends to users' photo libraries or documents or stored music tracks galling. Apple could become one of the most powerful and useful consumer Web companies in the world were it to make all its users' content available to them from any device that had Web access. Of course, that would reduce the need for each user to have one of their own, or better yet several of their own, Apple devices to access their personal clouds of data and media. If every device was an equal citizen on the Apple Web, it might depress the volume of sales, and prices, of Apple gear.

That's why Apple is keeping users prisoners in their gilded cages of Apple hardware. With iCloud we can more easly move from one cage to another, but, by design, there is hardly any support outside the Apple bubble.

Apple has done more than co-opt the internet, they've co-opted the concept of the cloud. Storing data on push servers isn't cloud computing in any sense, it's simply hiding the URL and transactions behind the face of the application. I'm sure the service uses standard HTTP protocols and does most of what any standard browser or FTP program would do, only automatically, invisibly, and without user interaction. Storage Area Networks and even multi-server relational databases are old-school examples of this -- it's nothing new, just a new monicker.

True cloud computing involves distributed, shared, ambiguous connections not unlike BitTorrent. Even Amazon's so-called "cloud" services are closer to the standard client<->server model. A genuine "cloud" application should have no discernible servers and be entirely autonomous of any singular control. I say this with some confidence because I'm building such an application right now. Everything else, while I certainly don't think any less of it, is simply client<->server computing or, as in the case of Apple, mere data storage on distributed storage.

Sincerely,

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